

Revision of *Philacelota* Heller, 1900 and *Engertia* Dalla Torre, 1912, with description of a new genus (Coleoptera: Scarabaeidae: Melolonthinae)

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Abstract: *Philacelota submaculata* Heller, 1900 is synonymized with *P. maculosa* (Brenske, 1896) comb. nov., *Engertia papuana* (Moser, 1913) and *E. aliolepis* Prokofiev, 2019 are synonymized with *E. amboinae* (Brenske, 1897), and *E. germanica* Prokofiev, 2016 is synonymized with *E. setifera* (Moser, 1913). *Engertia lili* Keith, 2006 possesses characters that do not fit either *Engertia* Dalla Torre, 1912 or *Philacelota* Heller, 1900 and is placed in *Philgertia* gen. nov.

Key words: Taxonomy, synonymy, new combinations, new genus, distributions, mutual relationships.

Introduction

Lacroix (2010) placed *Philacelota* Heller, 1910 in the Melolonthini Leach, 1819 and *Engertia* Dalla Torre, 1913 in the Leucopholini Burmeister, 1855, tribes that are maintained as distinct also in other recent works (e.g. Bezdek 2016). However, Britton (1978) did not recognize the tribe Leucopholini and Matsumoto (2010) and Prokofiev (2016a) questioned the split, as it does not appear to be supported by morphological evidence. Since the question of tribal division is not the topic of this paper and cannot be resolved by treating merely two small genera anyway, the tribe Melolonthini is regarded as an undifferentiated assemblage and the discussion of the two genera is confined to their mutual relationship.

Philacelota and *Engertia* are 14–22 mm long, vittate melolonthines limited to eastern Indonesia, New Guinea and the Philippines. They are poorly represented in collections, with some species known only from types. The only species currently known from larger numbers of specimens are *Engertia amboinae* (Brenske, 1897) and *E. lili* Keith, 2006, here placed in a new genus, whose distributions are relatively wide. It is hoped that the diagnoses and illustrations presented below bring to light additional specimens and improve our knowledge of these genera.

Material and methods

Generic characters are not repeated in species diagnoses. Length (L) is given from the tip of the clypeus to the tip of the elytra, pygidia are excluded.

Of the three antennal segments (scape, pedicel, flagellum) only the flagellum is taxonomically useful. In its proximal part, the funicle, the antennomeres are either subequal or differ in length and number but except for the wedge-shaped distal in the male remain transversely unexpanded, whereas in the distal part, the club, they are abbreviated and in addition to differing numbers are also transversely extended into thin lamellae. Hence, in this paper the antennomeres of the club are called ‘lamellae’.

The terms ‘seta’ and ‘scale’ refer to degrees of hair modification, both stiff and usually pigmented, that differ in shape and cross-section. Whereas setae are tubular and either erect or variously inclined or recumbent, scales are flattened in cross-section and always recumbent. However, the distinction between hairs and setae and setae and scales often becomes arbitrary because of the presence of transitional forms, which invites terms such as ‘setiform scales’ (e.g. Prokofiev 2019). On the abdominal ventrites such forms appear as ‘setiform hairs’, but those that are not undulate are in this paper called simply ‘setae’.

The presented habitus photos are mostly of males, as females differ merely in having a much smaller antennal club and can be assigned to species without difficulty. Where necessary,



specimens have been dissected and cleaned aedeagi glued to tips of paper tongues pinned underneath the specimens.

Collection codens:

BMNH – Natural History Museum (formerly British Museum, Natural History), London, United Kingdom;

CDT – Collection Dmitry Telnov, Rīga, Latvia;

MFNB – Museum für Naturkunde, Berlin, Germany;

MNHN – Muséum National d'Histoire Naturelle, Paris, France;

SMFC – Senckenberg Naturmuseum, Frankfurt am Main, Germany;

SMTD – Senckenberg Naturhistorische Sammlungen Dresden, Germany.

Abbreviations:

PNG – Papua New Guinea;

WNG – Western New Guinea, Indonesia.

Results

Taxonomy

Philacelota Heller, 1900

Heller (1900: 11)

Type species: *P. submaculata* Heller, 1900 (= *Philacelota maculosa* (Brenske, 1896) **comb. nov.**) subsequent designation by Zidek (2018).

Redescription: Integument brown, reddish brown to black or bicolored, with black head and pronotum and brown elytra. Vestiture composed of grayish-white or brownish oval and lanceolate scales, grayish-white or yellowish setae and hairs. Clypeus semicircular, its base formed by complete frontoclypeal suture. Male antenna composed of 10 articles with 7-lamellate club and funicle consisting of a single long antennomere. Female antenna composed of 10 articles with 5-lamellate much smaller club and funicle consisting of 3 antennomeres of which proximal is longest. Pronotum about one-quarter wider than long, widest at base or at midlength, with margins complete and sides weakly crenulate, base sinuate, front angles obtuse, hind angles briefly pointed or obtuse, and integument punctate except impunctate, posteriorly wider medial sulcus present throughout length. Scutellum obliquely triangular with anterior margin concave and incomplete, micropunctate and squamose near lateral margins, impunctate

on disc. Each elytron with 5 low, impunctate, glabrous ribs separating slightly wider, shallow, squamose or setose intervals. Sterna densely covered by long grayish-white to yellowish hairs, metasternal process short, peg-like, with rounded tip, metasternal plate with medial furrow present throughout length. Abdominal ventrites not connate, covered by white or brownish-yellow scales or short grayish-white setae. Femora squamose or setose. Protibia unidentate or incipiently bidentate, with dorsal and ventral longitudinal carina. Meso- and metatibiae setose, without transverse carinae. Distal tarsomere about as long as 2nd through 4th tarsomeres combined. Tarsal claws large, with ventral tooth at midlength. All spurs terminal, attached medial to tarsal base; protibial spur minute, meso- and metatibial spurs long and slender. Aedeagus symmetrical, with parameres about as long as phallobase. Parameres in dorsal view either gradually tapering toward pointed tips, or in distal third constricted and ending in weakly expanded tips; in lateral view either gradually tapering toward large, upturned shoe-shaped sharp tips, or in proximal half with large dorsal humps and in distal third with large, upturned shoe-shaped round tips.

Philacelota maculosa (Brenske, 1896) **comb. nov.** (Figs 1A–E, 2A & 8B)

Schoenherria maculosa Brenske (1896: 201), holotype ♀ SMTD from 'Ceylon' (seen); Dalla Torre (1912: 181) catalogue; Keith (2006: 94) key, as *Engertia*. Known only from the holotype.

= *Philacelota submaculata* Heller (1900: 12) **syn. nov.**, holotype ♂ SMTD from 'Nord-Celebes, Toli-Toli' (seen).

Other specimens examined: 1♂ BMNH from N Sulawesi, Tondano; 1♂ SMFC from S Sulawesi, Bantimurung.

Diagnosis: Head and pronotum grayish black, elytra subtly two-colored, chestnut and dark brown. Dorsal vestiture composed of spindle-shaped white scales, on elytra restricted to lighter-colored parts of intervals. Vestiture of abdominal ventrites composed of somewhat smaller spindle-shaped white scales and interspersed reddish-yellow and white setae. Tips of parameres in dorsal view weakly expanded but not distinctly spoon-shaped, in lateral view as in *P. sulana*.

Remarks: *Schoenherria* Burmeister, 1855 is a junior homonym of *Schoenherria* Blanchard, 1853, the replacement name is *Carlschoenherria* Bezděk, 2016 (p. 15). Keith (2006, key) used



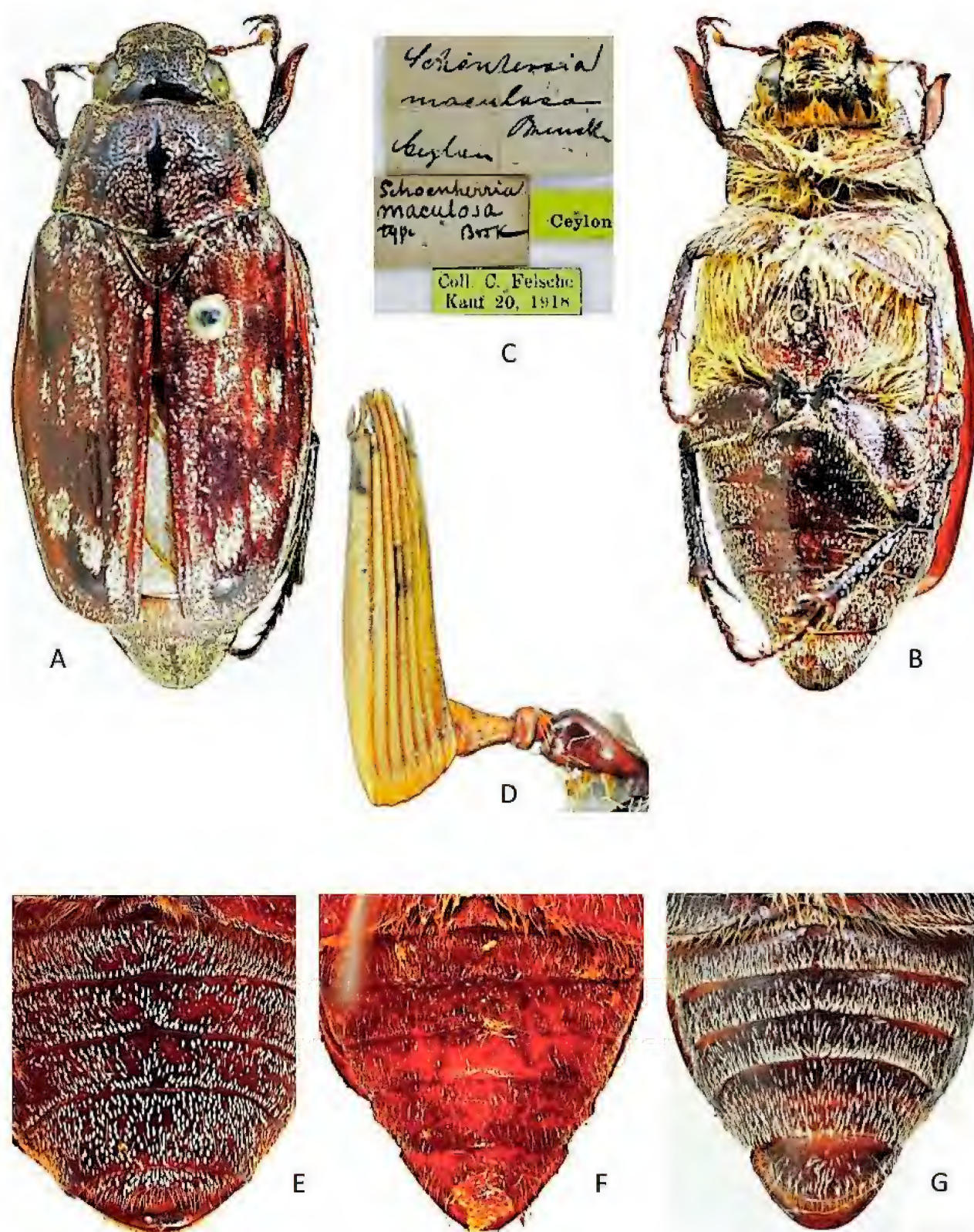


Figure 1A–G – *Philacelota* Heller, 1900 species. A – *P. maculosa* (Brenske, 1896) comb. nov., holotype ♀, L = 18.5 mm. A – Dorsal habitus; B – Ventral habitus; C – Original labels; D – *P. submaculata* Heller, 1900 (= *P. maculosa*), male antenna; E–G – Abdominal vestiture in type specimens of: E – *P. submaculata*, holotype ♂; F – *P. sulana* Heller, 1900, holotype ♂; G – *P. jakli* Zidek, 2018, holotype ♂ [not to scale].



the semicircular clypeus to differentiate *Engertia maculosa* from other *Engertia* species, however it is a feature characteristic of *Philacelota*. In fact the male type of *Philacelota submaculata* (Zidek 2018, fig. 9) and the female type of *Schoenherria maculosa* differ from each other only in the size of the antennal club, which in the latter closely resembles that in the female of *P. jakli* (Zidek 2018, fig. 8). The type locality 'Ceylon' appears to be erroneous, as all *P. submaculata* specimens are from Sulawesi.

***Philacelota sulana* Heller, 1900** (Figs 1F, 2B & 8C)
Heller (1900: 13), syntypes 1♂ & 1♀ SMTD from [Indonesia] 'Sula Mangoli' (seen).

Other specimens examined: 2♂ SMTD from Sula Mangoli [Mangole Island].

Diagnosis: Vestiture composed of short whitish setae denser on pronotal disc and abdominal ventrites, and sparse, confined to lighter-brown parts of intervals, on elytra. Tips of parameres in dorsal view expanded and spoon-shaped, in lateral view as in *P. maculosa*.

Remarks: The types are unnaturally red (Fig. 1F), evidently due to the kind of conserving fluid used. The natural colors are shown in Fig. 2B.

***Philacelota jakli* Zidek, 2018** (Figs 1G, 2C, 7A & 8A)

Zidek (2018: 2), holotype ♂ & allotype ♀ SMTD, paratypes 1♂ & 1♀ BMNH. Known only from the type series.

Type locality: Indonesia, Flores Island, Mt. Kuwus.

Diagnosis: Dorsal and abdominal vestiture composed of closely spaced whitish setae. Pronotum widest at midlength, its hind angles obtuse. Protibia with an incipient second lateral tooth, more developed in female. Paramere tips in dorsal view slender and blunt, in lateral view each expanded into a rounded ventral keel and a sharp dorsal peak.

***Philacelota* (?) *leucothea* Prokofiev, 2019**

Prokofiev (2019: 6, figs. 3-5), holotype ♂, paratypes 1♂ & 2♀ MNHN. Known only from the type series.
Type locality: Philippines, Luzon.

Diagnosis: Dorsal and abdominal vestiture composed of minute grayish-white, spindle-shaped scales of varying length covering entire elytra including three feeble, hard-to-discern ribs on each elytron. Pronotal medial sulcus narrow, present

only in anterior half of length. Parameres as in *P. maculosa* (Fig. 8B).

Comments: I have not been able to examine this species, nonetheless the original description and illustrations are detailed enough to render an opinion. The male antenna and the parameres are those of *Philacelota*, but the female antenna in Prokofiev's figure 4E appears to consist of 11 articles (6 in the club, 3 in the funicle, plus the scape and pedicel), the scale-covered elytral ribs are said to be only three on each elytron, and the narrow medial sulcus is present only in the anterior half of the pronotum. It appears the author photographed antennae of both female paratypes, since the one in his figure 4D consists of only 10 articles. The one in figure 4E thus may be aberrant, which should be possible to clarify by comparing it to its opposite member. This notwithstanding, however, the less numerous and densely squamose elytral ribs and the short pronotal sulcus cause me to suspect that this species belongs to another genus.

Engertia Dalla Torre, 1912

Dalla Torre (1912: 181), nomen nov. pro *Phila* Brenske. Type species: *Phila amboinae* Brenske, 1897 by monotypy.

= *Phila* Brenske (1897: 110), nomen praeoccup.

Redescription: Integument creamy brown, chestnut brown or black; vestiture composed of white, grayish-white or brownish-yellow oval, lenticular, lanceolate, and spindle-shaped scales, grayish-white or yellowish setae and hairs. Clypeus obliquely pentagonal, its base formed by faint but complete frontoclypeal suture. Antenna in both sexes composed of 10 articles with 5-lamellate club and funicle consisting of 3 antennomeres subequal in females and distal shorter, wedge-shaped in males; lamellae much shorter in females. Pronotum about one-quarter wider than long, widest at base, with margins complete and sides weakly crenulate, base sinuate, front angles obtuse, hind angles briefly pointed, integument punctate except impunctate, posteriorly wider medial sulcus present throughout length. Scutellum obliquely triangular, with anterior margin concave and incomplete, micropunctate and squamose near lateral margins, impunctate on disc. Each elytron with 5 low, impunctate glabrous ribs separating slightly wider, shallow, densely squamose intervals. Sterna densely covered by long grayish-white to yellowish hairs, metasternal process short, peg-like, with rounded tip, metasternal plate with medial



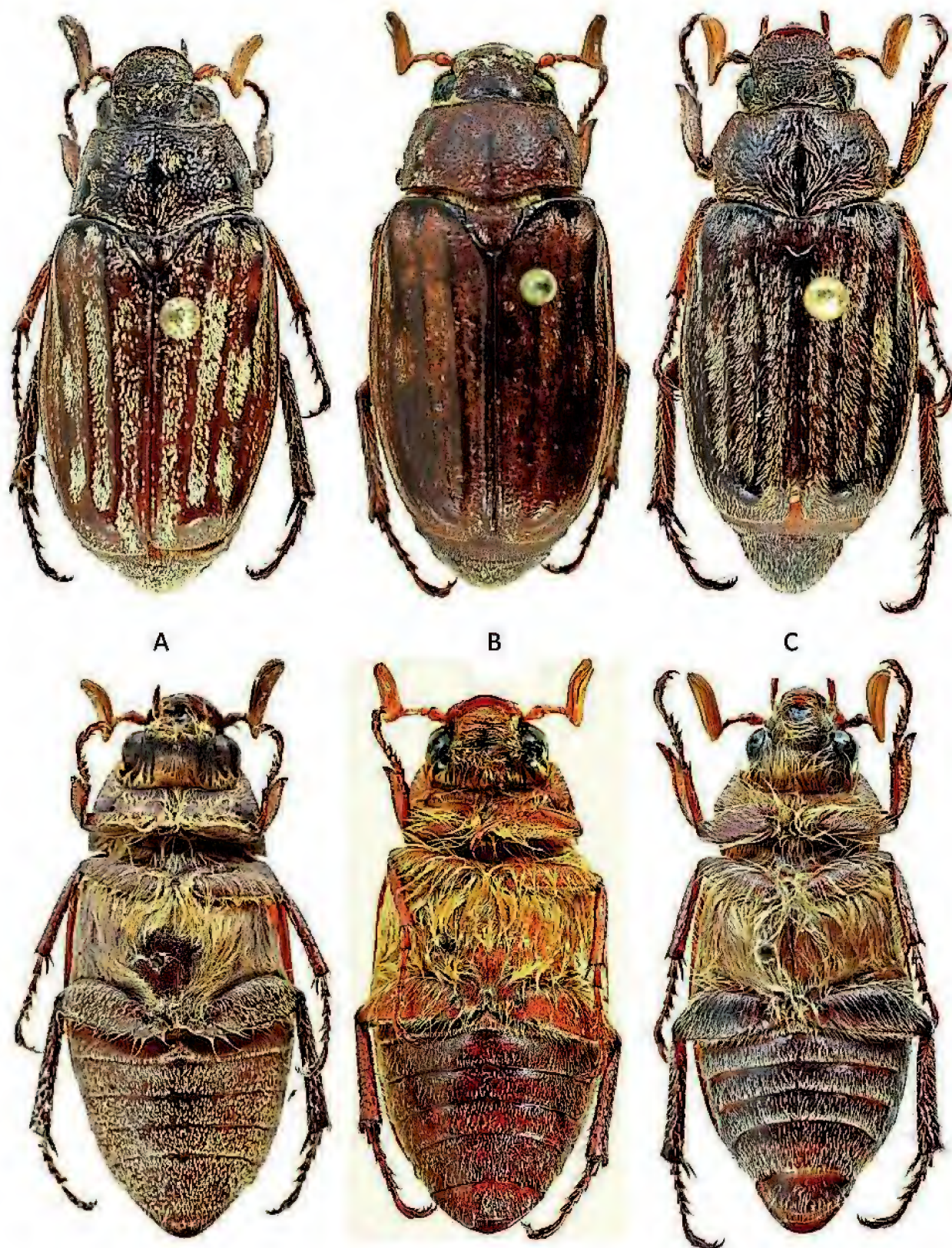


Figure 2A–C. Dorsal (top) and ventral (bottom) habitus of male *Philacelota* Heller, 1900. A – *P. submaculata* Heller, 1900 (= *P. maculosa* (Brenske, 1896)), Sulawesi, L = 15 mm; B – *P. sulana* Heller, 1900, Sula Islands, Mangole, L = 14 mm; C – *P. jakli* Zidek, 2018, Lesser Sunda Islands, Flores I., L = 14 mm [not to scale]. Parameres in Fig. 8A–C.



furrow present throughout length. Abdominal ventrites covered by white or brownish-yellow scales or short grayish-white setae or both, in some specimens with medial concentration of scales on 1st through 3rd ventrites and 1st + 2nd ventrites medially connate. Femora squamose or setose, or both. Protibia unidentate, with dorsal and ventral longitudinal carina. Meso- and metatibiae setose, without transverse carinae. Distal tarsomere about as long as 2nd through 4th tarsomeres combined. Tarsal claws large, with ventral tooth at midlength. All spurs terminal, attached medial to tarsal base; protibial spur minute, meso- and metatibial spurs long and slender. Aedeagus symmetrical, with parameres about as long as phallobase. Parameres in dorsal view gradually tapering, with tips either pointed or weakly expanded into minute spoon-like shape; in lateral view gradually tapering toward large, upturned shoe-shaped round tips.

***Engertia amboinae* (Brenske, 1897)** (Figs 3–4, 7B & 8D–E)

Brenske (1897: 111), as *Phila*; holotype ♀ & paratype 1♂ SMFC (seen).

Type locality: [Indonesia], ‘Uliasser 94’ [Lease Islands]. Other specimens examined: 1♀ BMNH from Ambon Island; 1♀ BMNH without data; 1♀ CDT from Indonesia, Raja Ampat, Waigeo Island, 1.5 km W Waisai, Waisai sea port, 00°25’56”S, 130°48’17”E, 21.II.2012, secondary coastal vegetation; 3♂ & 1♀ BMNH from WNG, Fakfak [labelled as *E. papuana*]; paratypes 1♂ & 2♀ [labelled as syntypes] MFNB from ‘Amboina’ [now Ambon] Island; 2♀ MGNB from ‘Amboina’ [now Ambon] and Buru islands; 2♀ MFNB [labelled as *Phila maculosa*] from Finschhafen, PNG; 1♀ SMFC from Seram Island [formerly Ceram], Central Maluku.

= *Engertia papuana* Moser (1913: 283) **syn. nov.**, as *Phila*; holotype ♂ MFNB, WNG, Takar (seen).

= *Engertia allolepis* Prokofiev (2019: 3, figs. 1, 2A–G) **syn. nov.**; holotype ♂ MNHN from Ambon Island. Known only from the holotype.

Diagnosis: Dorsal scales of more than one shape, including on elytra. Abdominal vestiture composed of oval scales and of setae present either on all ventrites or only on last ventrite. Parameres in dorsal view gradually tapering, with tips pointed.

Remarks: Brenske (1897) based the description of *Phila amboinae* on a male, a female, and presumably also on the three MFNB paratypes. The original ‘n. sp.’ black-frame label is attached to the female, which apparently resulted in subsequent labeling of the female as the holotype and the male as the paratype. Red type labels were obviously

added more recently, because the ‘Holo-’ and ‘Para-’ prefixes are written in ballpoint that became available only much later. The original description is complete enough to have allowed G. J. Arrow to identify (‘determined from description’) the BMNH female specimens as *E. amboinae*. In contrast to the holotype (Fig. 3A), the abdominal vestiture of the paratype (Fig. 3B) consists chiefly of grayish setae; however, some small scales are present, leading to the conclusion that the difference is only a variation expectable in a population. Size, shape and color of the scales cannot be used to discriminate among *E. amboinae*, *E. papuana* and *E. allolepis*, because they all combine in these taxa, especially on the elytra. For instance the elytral scales in the holotype of *E. papuana* (Fig. 3C) are markedly smaller and less imbricating than those in the types of *E. amboinae* (Fig. 3A–B), but those in specimens from WNG customarily identified as *E. papuana* (Fig. 4) do not differ in size and shape from those of *E. amboinae*. The only detectable difference in these specimens is the distribution of setae on abdominal ventrites, which in the types of *E. amboinae* are present in variable amounts on all ventrites, whereas in *E. papuana* (Figs 3C & 4) and *E. allolepis* are confined to the 4th ventrite. That could support *E. papuana* and *E. allolepis* as subspecies of *E. amboinae* if it would not be for the presence of *E. amboinae* in the Schouten Islands, WNG (Prokofiev 2016b) and of *E. allolepis* in the Moluccas (Ambon Island, Prokofiev 2019). From the biogeographic standpoint it reduces these taxa to infrasubspecific status, and they are therefore synonymized with *E. amboinae*.

***Engertia setifera* (Moser, 1913)** (Figs 5 & 8F–G)

Moser (1913: 284), as *Phila*; holotype ♀ MFNB (seen).

Type locality: [Indonesia], Ocliasers, Saparoea [now Saparua Island, Lease Islands].

Other specimens examined: 1♂ BMNH from Ceram Island [now Seram]; 2♂ & 1♀ SMTD from ‘Ceram’.

The male, from Seram [Ceram] Island, was described by Prokofiev (2015); the specimen is said to be later deposited at the Moscow State University Zoological Museum.

= *Engertia germanica* Prokofiev (2016a: 68, figs. 1–5) **syn. nov.**; holotype ♂ & paratype ♀ MFNB from PNG, New Berlin.

Diagnosis: Integument usually chestnut brown, rarely black with purple hue (holotype). Dorsal vestiture composed of minute brownish-yellow



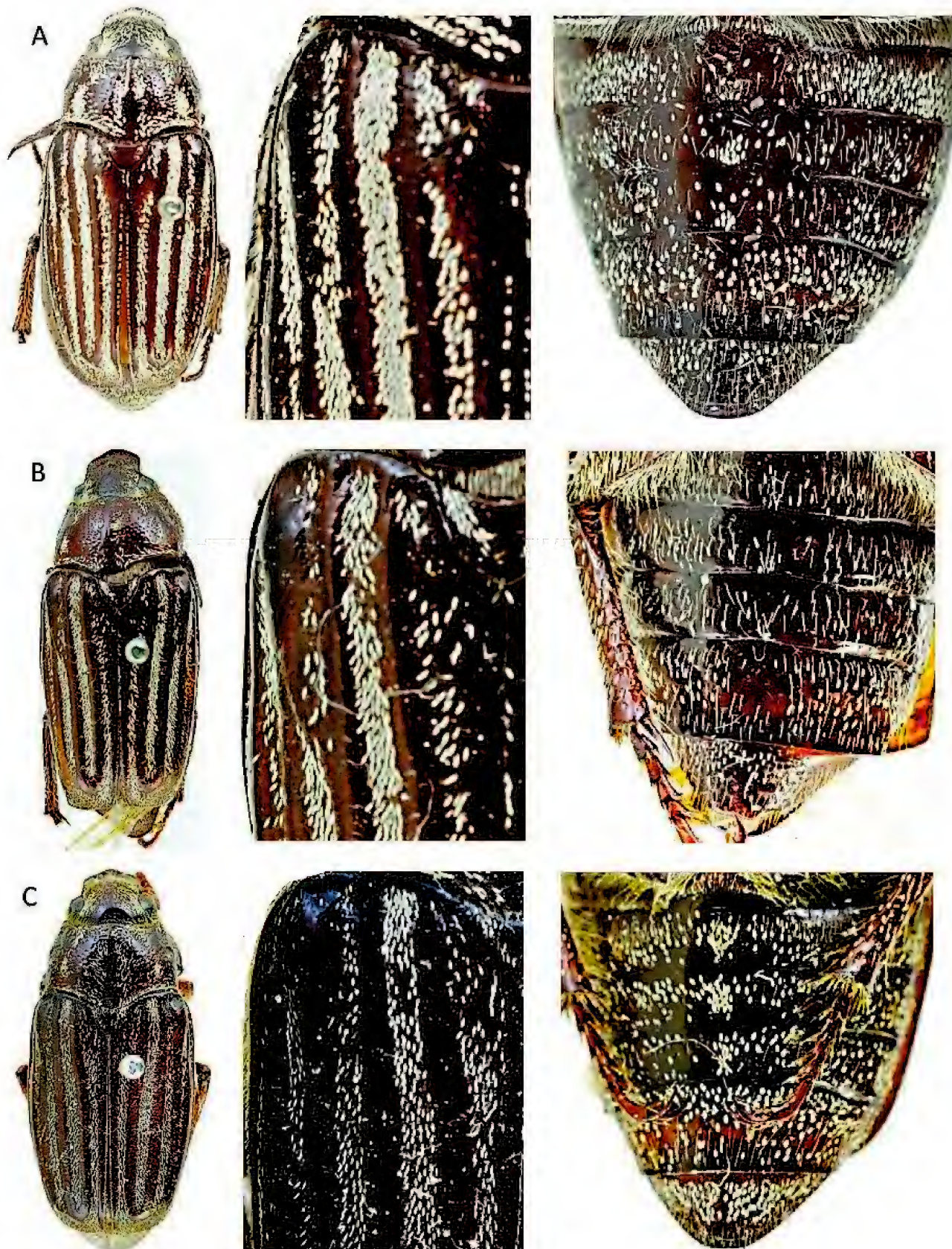


Figure 3A–C. Dorsal habitus (left), base of left elytron (center) and abdominal ventrites (right) of type specimens of *Engertia* Dalla Torre, 1912. A – *E. amboinae* (Brenske, 1897), holotype ♀, L = 15.5 mm; B – *E. amboinae*, paratype ♂, L = 16 mm; C – *E. papuana* (Moser, 1913), holotype ♂, L = 16.5 mm [not to scale]. Parameres in Fig. 8D–E.



or rarely white (holotype) spindle-shaped, closely spaced but non-imbricating scales. Abdominal vestiture ranging from short yellowish setae to admixture of grayish-white to yellowish hairs and sparse oval white scales. Paramere tips in dorsal view weakly expanded into either brief or elongate spoon-like shape.

Remarks: Regardless of the color of integument and vestiture, *E. setifera* can be distinguished from *E. amboinae* by the slender, spindle-shaped, non-imbricating dorsal scales (Fig. 5C) and the spoon-shaped, variably brief to elongate paramere tips (Fig. 8F–G). *E. germanica* is known only from the types that could not be examined because they have yet to be returned to MFNB. However, there is nothing in the original description and figures that could be deemed to justify a new species, and the specimens thus are hereby regarded as merely a geographic extension of *E. setifera* previously known only from central Moluccas.

***Philgertia* gen. nov.**

Type species: *Engertia lili* Keith, 2006 by present designation.

Derivatio nominis: Feminine, combination of the names *Philacelota* and *Engertia*, alluding to its relationship.

Description: Integument light to dark brown. Vestiture composed of chalk white oval and lanceolate scales, grayish-white and yellowish setae and hairs. Clypeus intermediate between semicircular and obliquely pentagonal, its base formed by complete frontoclypeal suture. Male antenna composed of 10 articles with 6-lamellate club whose proximal lamella is markedly shorter than preceding lamellae, and funicle consisting of 2 antennomeres of which much shorter distal interlocks with proximal lamella of club. Female antenna composed of 11 articles with 6-lamellate much smaller club, and funicle consisting of 3 antennomeres of which proximal spans half of funicle length. Pronotum about one-quarter wider than long, widest at base, with margins complete and sides weakly crenulate, base sinuate, front angles obtuse, hind angles briefly pointed, and integument punctate except wide, impunctate medial sulcus present throughout length. Scutellum obliquely triangular with anterior margin concave and incomplete, micropunctate and squamose near lateral margins, impunctate on disc. Each elytron with 5 impunctate glabrous ribs separating slightly wider squamose intervals. Sterna densely covered by long grayish-white to yellowish hairs,

metasternal process short, peg-like, with rounded tip, metasternal plate with medial furrow present throughout length. Abdominal ventrites not connate, covered by evenly distributed white oval scales that become smaller and denser toward lateral margins. Femora squamose and setose/pilose. Protibia unidentate, with dorsal and ventral longitudinal carina. Meso- and metatibiae setose, without transverse carinae. Distal tarsomere about as long as 2nd through 4th tarsomeres combined. Tarsal claws large, with ventral tooth at midlength. All spurs terminal, attached medial to tarsal base; protibial spur minute, meso- and metatibial spurs long and slender. Aedeagus symmetrical, with parameres about as long as phallobase. Parameres in dorsal view gradually tapering to constricted distal third and ending in weakly expanded elongate tips; in lateral view proximally with large dorsal humps and in distal third with large downturned (i.e. convex margin facing up) shoe-shaped round tips.

***Philgertia lili* (Keith, 2006) comb. nov. (Figs 6, 7C & 8H)**

Keith (2006: 91), as *Engertia*; holotype ♂ & allotype ♀ from Philippines, Leyte Island, Mt. Balocawe [= Balocawe]; 2♂ & 2♀ paratypes from same locality and date; 1♂ paratype from Philippines, Kabeng, May 2000; 2♂ paratypes from Philippines, Palawan I., Nov. 2004 [all types in Keith's collection].

Type locality: Philippines (Leyte, Kabeng, Palawan Is.).

Other specimens examined: 9♂ & 3♀ BMNH from Palawan Island, Salakot Mtn.

Diagnosis: As for genus.

Comments: The male club/funicle connection consists of a wedge in the distal antennomere of the funicle that fits in a V-shaped pocket in the base of the proximal club lamella (Fig. 7C). The relative length of the proximal lamella is fairly constant in the specimens examined, but can be expected to vary with population and/or to differ in minor/major males. In all the males examined the overlapping scales completely obscure the integument of the elytral intervals, partial wear exposing the integument has been observed only in the females.



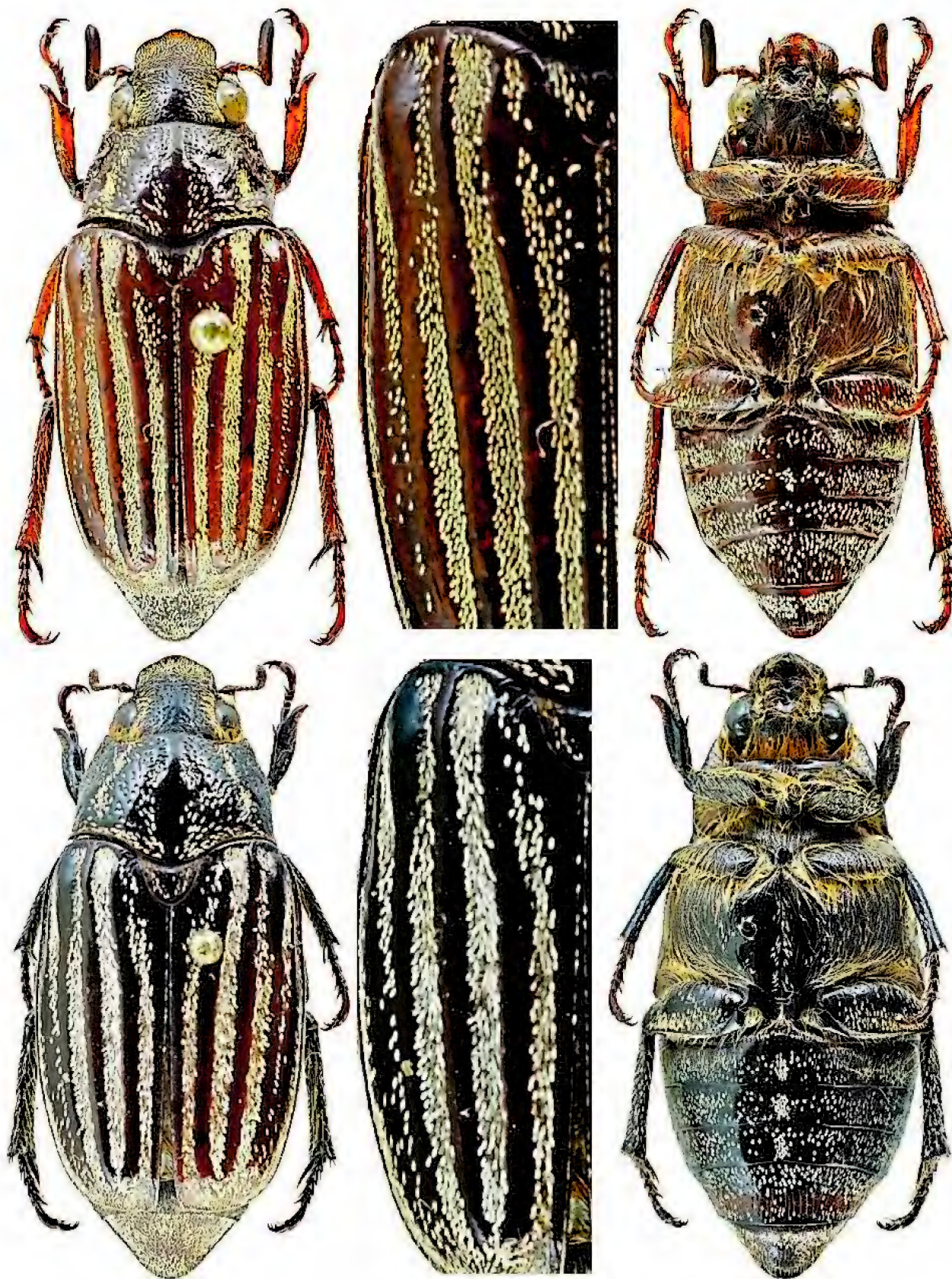


Figure 4. *Engertia amboinae* (Brenske, 1897), habitus and enlarged left elytrons of specimens from Fakfak, WNG, previously identified as *E. papuana* (Moser, 1913). Top – male, L = 16 mm; Bottom – female, L = 19 mm [not to scale]. Parameres in Fig. 8E.





Figure 5A-E. *Engertia setifera* (Moser, 1913). A – Male dorsal habitus, L = 16 mm; B – Male right antenna; C – Enlarged base of left elytron of holotype ♀; D-E – Variation in heads and vestiture of abdominal ventrites in two male specimens from Central Moluccas, Seram (D – BMNH, E – SMTD) [not to scale]. Parameres in Fig. 8F-G.



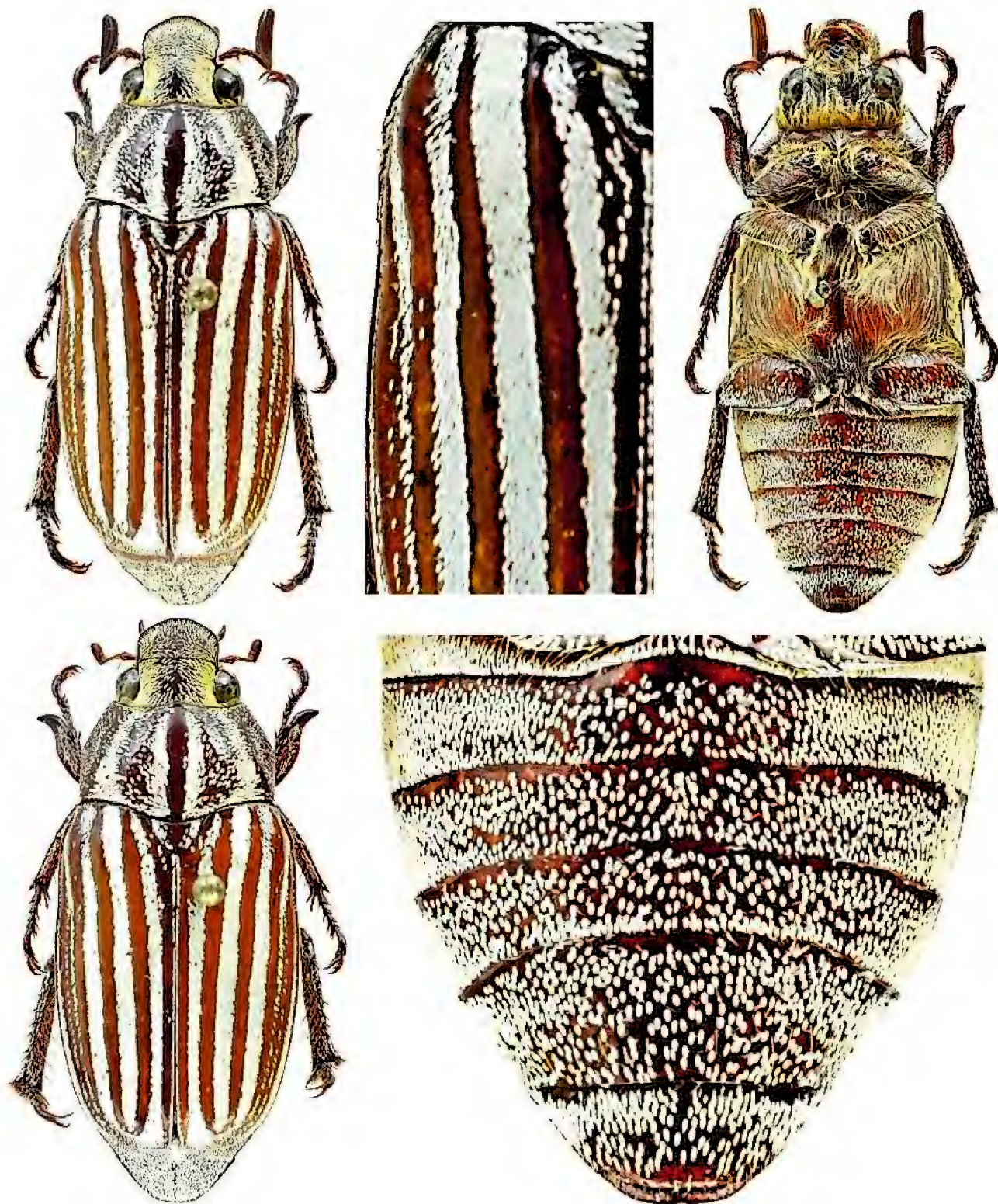


Figure 6. *Philgertia lii* (Keith, 2006). Top – male, L = 19 mm, habitus and enlarged left elytron; Bottom – female, L = 20 mm, dorsal habitus and enlarged abdominal ventrites [not to scale]. Antennae in Fig. 7C, parameres in Fig. 8H.





Figure 7A–C. Male (left) and female (right) antenna of: A – *Philacelota jakli* Zidek, 2018; B – *Engertia amboinae* (Brenske, 1897); C – *Philgertia lili* (Keith, 2006) [not to scale].



Mutual relationships of *Engertia*, *Philacelota* and *Philgertia*

The habitus of these three genera is so similar that Keith (2006, key) placed *Philacelota maculosa* (Brenske) and *Philgertia lii* (Keith) in *Engertia*, in effect regarding the three as one. However, a closer examination reveals supraspecific differences that justify maintaining *Philacelota* Heller and *Engertia* Dalla Torre as separate genera and referring *Engertia lii* to the new genus, *Philgertia*. The supporting characters are shown in Table 1. Connateness of abdominal ventrites has been observed in some specimens of *Engertia*, but is left out from the table as being too inconsistent. The most obvious and stable differences can be seen in the antenna and the aedeagus. The male antenna of *Philgertia* is peculiar in possessing a club/funicle interlocking mechanism, and the female antenna of *Philgertia*, which lacks this mechanism, consists of 11 rather than 10 articles (Fig. 7C). The parameres of *Philgertia lii* (Fig. 8H) differ from those of *Philacelota sulana* Heller (Fig. 8C) only in the downward vs. upward curvature of their tips, which contrasts with the easily distinguishable habitus of these species characterized by the

densely squamose vs. sparsely setose vestiture (Figs 2B & 6).

Philacelota and *Philgertia* share the long basal antennomere of the funicle (Fig. 7A, C), the uniformly squamose or setose vestiture of the first through fourth abdominal ventrites without scale/seta combination and without medial concentration of scales/setae (Figs 1–2 & 6), and close similarity of the parameres (in *Philacelota* two of three species) (Fig. 8B–C, H). In *Engertia*, on the other hand, the antennomeres of the funicle are subequal (Fig. 7B), the vestiture of abdominal ventrites contains combination of scales and setae in variable proportions and medial concentration of scales/setae is to some extent present on at least the first and second ventrites (Figs 3–5), and the parameres are more slender, with tips either sharp or slightly expanded (Fig. 8D–F). The medial concentration of scales/setae may have to do with connateness, which is absent in the other two genera. Overall, *Philacelota* and *Philgertia* appear to be more derived and more closely related to each other than either of them is to *Engertia*.

Table 1. Comparison of generic characters of *Engertia*, *Philacelota* and *Philgertia* gen. nov.

Characters	<i>Engertia</i> Dalla Torre	<i>Philacelota</i> Heller	<i>Philgertia</i> gen. nov.
Clypeus: margin	Obliquely pentagonal	Semicircular	Intermediate semicircular/pentagonal
Antenna: club	♂ – 5-lamellate ♀ – 5-lamellate	♂ – 7-lamellate ♀ – 5-lamellate	♂ – 6-lamellate, proximal lamella ½ as long ♀ – 6-lamellate
Antenna: funicle	♂ – 3, distal antennomere short ♀ – 3 subequal antennomeres	♂ – single long antennomere ♀ – 3, proximal antennomere longest	♂ – 2, proximal antennomere longer ♀ – 3, proximal antennomere longest
Ventrites: vestiture	Medial scales/setae form diffuse patches	Scales/setae evenly distributed	Scales evenly distributed
Paramere tips: dorsal view	Sharp or weakly expanded	Blunt to weakly expanded	Expanded
Paramere tips: lateral view	Shoe-shaped, upturned	Shoe-shaped, upturned	Shoe-shaped, downturned

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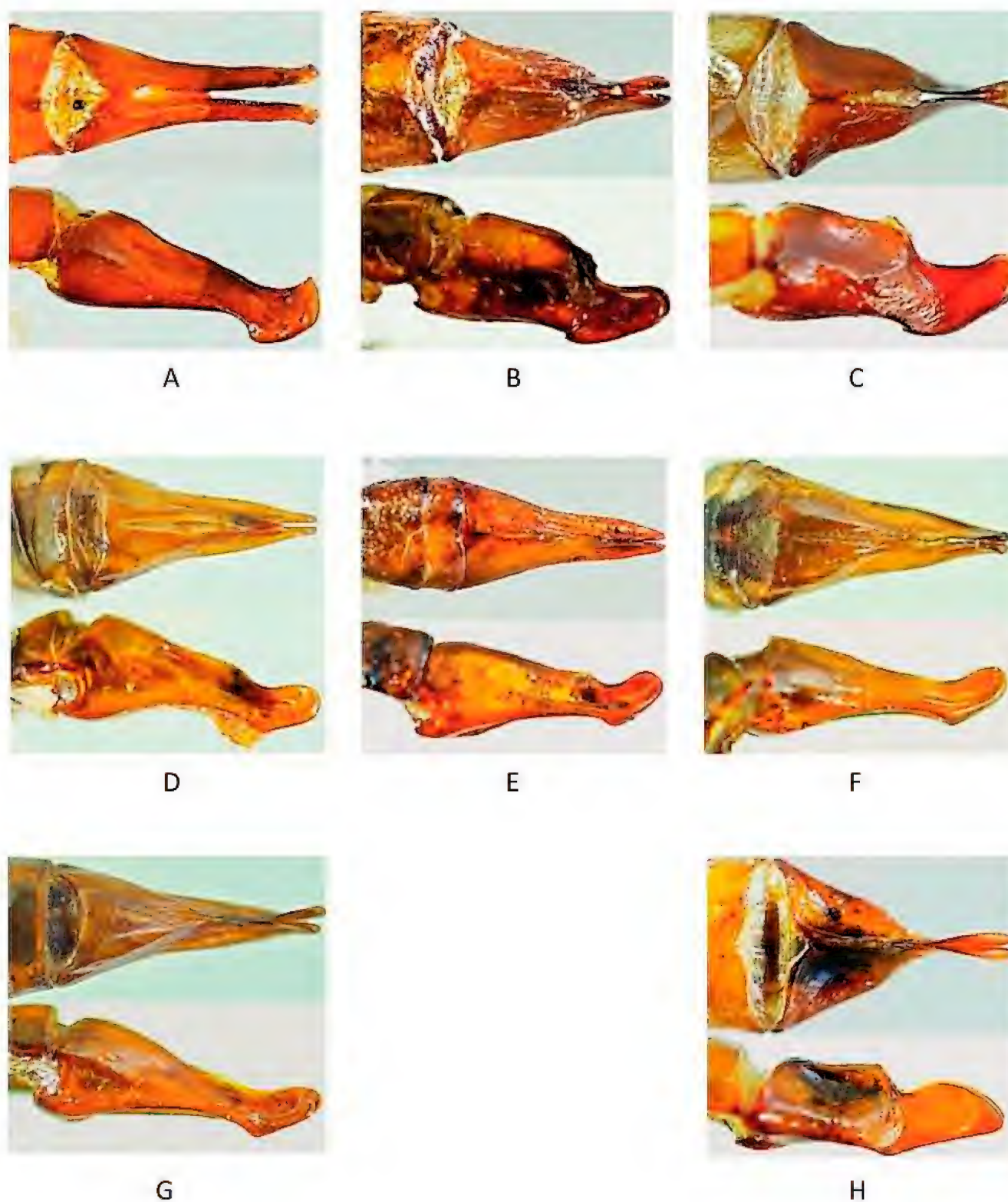


Figure 8A–H. Dorsal (top) and lateral (bottom) views of parameres in: A – *Philacelota jakli* Zidek, 2018, holotype; B – *Philacelota submaculata* Heller, 1900 (= *P. maculosa* (Brenske, 1896)); C – *Philacelota sulana* Heller, 1900; D – *Engertia amboinae* (Brenske, 1897), paratype; E – *Engertia papuana* (Moser, 1913); F – *Engertia setifera* (Moser, 1913), Seram I., SMTD; G – ditto, Seram I., BMNH; H – *Philgertia lii* (Keith, 2006) [not to scale].



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